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EXPLANATION OF PLATE V.

- Fig. 1. Wing of *Tanypremna longipes* Fabricius.
Fig. 2. Wing of *Tanypremna opilio* Osten Sacken.
Fig. 3. Wing of *Tanypremna columbiana* Enderlein (after Enderlein).
Fig. 4. Wing of *Tanypremna regina* n. sp.
Fig. 5. Wing of *Megistocera longipennis* Macquart.
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**NEW BEES OF THE GENUS HALICTUS (HYM.)
FROM UNITED STATES, GUATEMALA
AND ECUADOR.¹**

BY MARION DURBIN ELLIS,

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Below are presented the descriptions of six new bees belonging to the genus *Halictus* (*Chloralictus*). Two of these species, one from Wisconsin and one from New Mexico have the abdomen amber yellow and show no close affinities with the remaining four from tropical America. These last four species together with *H. exiguus* Smith and *H. deceptor* Ellis, have several characters in common and seem to be closely related. They show more or less distinct resemblance to the species related to *H. zephyrus* Smith, a common form in the United States. Among the species most like *H. zephyrus* is *H. umbripennis* Ellis, found in Guatemala. This species is however a very distinctive form of a uniform olive color with fuscous clouded wings and is not to be confused with the six much smaller species here considered. These six bees are all small being 5 mm. or less in length; all except *H. deceptor* have the facial quadrangle almost, if not quite, as broad as long; in each the punctures of the mesonotum are more crowded about the parapsidal grooves than elsewhere, the basal area of the metathorax is without a rim truncating the lateral plicæ, the wings are brownish and the abdomen is very shiny, especially

¹ The specimens upon which these descriptions are based are part of the collections of Professor T. D. A. Cockerell. I wish to thank Professor Cockerell for help and direction in the present study, undertaken in the zoological laboratory at the University of Colorado.

the disc of the first segment which is often quite impunctate. These species may be separated from one another by the following key:

- a. Punctures of the mesonotum very fine and widely scattered in the broad area on either side of the median groove.
 - b. Hind legs and tarsi of the other legs light brown; abdomen dark brown, the margins of the segments testaceous; clypeus short, extending very little below the eyes; tegulæ and stigma testaceous; margin of the basal area of the metathorax not elevated near the middle.

H. exiguus Smith.
 - bb. Legs dark brown or black, tarsi sometimes lighter; abdomen piceous, the broad margins of the segments not testaceous.
 - c. Clypeus somewhat produced, about one-half its length extending below the eyes; tegulæ almost colorless testaceous; stigma light yellowish brown; tarsi rufo-testaceous.....*H. tropicior* n. sp.
 - cc. At least two thirds of the clypeus produced below the eyes; stigma and tegulæ dark brown.....*H. exiguiformis* n. sp.
- aa. Punctures of the mesonotum quite close and coarse (*i. e.*, as compared with other small bees).
 - d. Head and thorax blue-green; stigma and tegulæ very dark brown.
 - e. Posterior margin of the basal area of the metathorax not elevated; facial quadrangle longer than broad; abdomen shiny black.

H. deceptor Ellis.
 - ee. Basal area of the metathorax narrow, the outer margin very slightly elevated on either side of middle; facial quadrangle as broad as long; clypeus rather narrow, produced almost its entire length below the eyes; abdomen black with dark metallic green reflections.....*H. hypochlorus* n. sp.
 - dd. Mesonotum bright golden green, head and remainder of the thorax olive green; stigma and tegulæ yellowish testaceous; posterior margin of the basal area of the metathorax very slightly elevated on either side of the middle; facial quadrangle a little broader than long, clypeus produced for about half its length below the eyes; abdomen dark brown with faint olive green reflections.

H. chrysonotus n. sp.

Halictus tropicior new species.

Female 5 mm. or a little more. Head and thorax dark metallic green, abdomen dark brown, the broad margins of the segments shading to somewhat lighter brown near the edge. Facial quadrangle almost as broad as long, narrower below, very closely punctured except on the clypeus and the supra-clypeal area, clypeus blackish and shiny with a few coarse punctures, supra-clypeal area very dark green with some slight coppery reflections, faintly lineolate and with a few rather fine punctures; flagellum, especially the under side, yellowish near the tip; mesonotum shiny, the punctures very fine and scattered, more crowded about the parapsidal groove; disc of the metathorax

without a rim; lateral areas of the metathorax bulging a little beyond the margin of the basal area, basal area sharply lineolate and with a few simple but rather strong plicæ, margin of the basal area shiny, slightly elevated across the middle; wings pale brownish, stigma and nervures light brown, costal nervure darker; tegulæ testaceous, appearing almost colorless; legs blackish, the knees and tarsi clear red brown; abdomen broad and shiny, the disc of the first segment very finely lineolate but with only very minute punctures, the other segments finely but coarsely punctured; pubescence very scant, buffy on the legs, pale yellowish around the anal rima.

Habitat.—Quirigua, Guatemala. 1 (= type), at flowers of *Ipomæa quinquefolia* Griseb. February 20, 1912 (Mrs. W. P. Cockerell).

The paucity of pubescence may be correlated with the age of the specimen as indicated by the somewhat tattered and worn condition of the wings.

***Halictus exiguiformis* new species.**

Female 5 mm. Head and thorax dark metallic green, abdomen piceous, the broad margins of the segments dark brown. Facial quadrangle almost as broad as long, almost the entire length of the clypeus produced below the eyes, the lateral area of the face sharply lineolate but not so closely punctured as in *H. tropicior* Ellis; supraclypeal area sharply lineolate, with fine scattered punctures, clypeus, except for a narrow black margin, green like the rest of the head; flagellum lighter below; mesonotum finely lineolate, the punctures fine and widely scattered on either side of the median groove, crowded on either side of the parapsidal grooves and along the posterior margin of the segment; metathorax short and rather narrow, no rim around the disc, basal area lineolate, with a few short simple plicæ, the posterior margin not at all elevated; tegulæ dark brown; wings distinctly brownish, nervures and stigma dark brown; legs piceous, shading to reddish brown on the tarsi; abdomen shiny, the disc of the first segment almost impunctate, disc of the following segments with very fine punctures; pubescence scant, pale grayish buff on the sides of the abdomen, around the anal rima, on the mesonotum and on the legs, more grayish below.

Habitat.—Guayaquil, Ecuador. 1 (= type) (von Buchwald, Alfken collection number 23).

***Halictus hypochlorus* new species.**

Female 5 mm. Head and thorax dark metallic green, more or less shiny; abdomen blackish with dark metallic green reflections. Facial quadrangle about as wide as long, clypeus produced half its length below the eyes, lateral areas of the face and supraclypeal area rather shiny; mesonotum not sharply lineolate, a little shiny but rather coarsely and very closely punctured, the

punctures less crowded on either side of the median groove; disc of the metathorax without a rim, basal area coarsely lineolate and with numerous short simple plicæ, concave in the middle, the posterior margin broad, rounded and shiny, elevated near the middle but not forming a rim truncating the most lateral of the plicæ; tegulæ dark testaceous; wings slightly brownish and dusky, stigma and nervures brown; legs black, knees and tarsi of the last two pairs of legs light brown; abdomen very shiny, disc of the first segment impunctate, margins not lighter than the rest of the segments; pubescence scant, pale yellowish gray on the legs where it is most abundant.

Habitat.—Guayaquil, Ecuador. 1 (=type) May–June, 1913 (C. T. Brues).

Halictus chrysonotus new species.

Female 5 mm. Head and thorax dark metallic green, mesonotum golden green, abdomen very dark brown to almost piceous, with distinct olive green reflections; facial quadrangle almost if not quite as broad as long, clypeus rather narrow at its base, produced half its length below the eyes, lateral areas and the supraclypeal area sharply lineolate; distal two-thirds of the flagellum ochraceous; mesonotum rather broad, closely and rather coarsely punctured, the punctures more crowded about the parapsidal grooves than elsewhere, sharply but finely lineolate; scutellum more shiny than the mesonotum, the punctures finer, less distinct and not so close; disc of the metathorax without a rim, the basal area sharply narrowed on the sides, forming a truncated triangle with rather sharp rugose plicæ radiating from the basal margin of the segment, the outer margin of the basal area very slightly elevated on either side of the middle; wings a little brownish, tegulæ and stigma bright testaceous, nervures dark brown; legs black, knees and tarsi bright brown, inner spine of the hind tibia with but three teeth, the first almost half as long as the spine, rounded at the free end and almost cylindrical; abdomen very shiny, the disc of the first segment almost impunctate, very dark brown shading into red brown on the broad margins of the segments, the whole with elusive olive green reflections; pubescence scant, light brownish on the legs, grayish below.

Habitat.—Guayaquil, Ecuador. 1 (=type), May–June, 1913 (C. T. Brues).

Halictus graenicheri² new species.

Female 5 to 5.5 mm. Head and thorax olive green; abdomen clear, reddish amber-color, without darker clouds or markings; margins of the segments pale testaceous. Facial quadrangle a little longer than wide, but not elongate, perceptibly narrowed below; distal half of the clypeus black; hair on the lateral areas of the face rather abundant and of a dirty white color; mesonotum sharply lineolate, with moderately coarse, sharp, close punctures; no rim around the truncation of the metathorax; basal area of the metathorax rather broad and quite concave, its distal margin elevated across the middle so as to

² Dr. S. Graenicher, Public Museum, Milwaukee, Wisconsin.

form a short, narrow rim which does not truncate the lateral plicæ; rugæ rather strong; tegulæ testaceous; wings hyaline, stigma pale, nervures dark testaceous; legs dark brown, tarsi and knees a little lighter, reddish to dark testaceous; abdomen somewhat shiny, all of the segments except the first with rather abundant, short, buffy pubescence; pubescence on the legs somewhat darker and more abundant, and that on the sides of the thorax paler and longer.

This species is quite similar to *H. nymphalis* Smith from Florida, from which it is separated by the fuscous bands on the abdomen and the finer punctures on the mesonotum of *H. nymphalis*. *H. graenicheri* also resembles *H. testaceus* Robertson which however lacks the short rim across the basal area of the metathorax. This partial rim suggests the three species *H. clematisellus* Cockerell, *H. mesillensis* Cockerell and *H. vierecki* Crawford, which also have yellow abdomens. These species may be distinguished by their abundant pubescence, which is snow white in the first two and golden yellow in the latter.

Habitat.—Genoa, Vernon County, Wisconsin. 1 (=type) and 1 cotype, July 13, 1911 (Graenicher, Nos. 52738 and 53067).

***Halictus clarissimus* new species.**

Female 5 mm. Head and thorax rather light, somewhat greenish blue; abdomen clear amber yellow, darker at the apex, the margins of the segments yellow. Facial quadrangle about as broad as long, narrowed below; emargination of the eye rather deeper than in most species of this genus; clypeus short, not extending below the eye; clypeus and lateral areas of the face with rather abundant white pubescence; flagellum reddish brown near the tip; mesonotum shiny, the punctures very fine and scattered in the middle, more crowded around and at the anterior end of the parapsidal grooves; wings clear, hyaline; tegulæ, stigma and nervures, except the costal, pale honey color; legs reddish brown, knees and tarsi, except the terminal joint, testaceous; disc of the metathorax without a rim; lateral areas of the metathorax full and shiny, the basal area roughened, its plicæ rather numerous, those in the middle more or less rugose, the lateral ones straight and extending onto the lateral areas; margin of the basal area of the metathorax rounded, shiny and elevated across the middle; abdomen rather shiny but with numerous, very fine, shallow punctures; pubescence thin and whitish, rather uniformly distributed over the abdomen and the sides of the thorax.

This species is placed in a group with *H. zephyrus* Smith although the sculpture of the basal area of the metathorax is not in strict accord with this grouping. *H. clarissimus* resembles *H. pallidellus* Ellis more than any other species. The short clypeus and broad facial

quadrangle distinguish it from all of the species with yellow abdomen except *H. kuntzei* Cockerell which has a green, not blue, head and thorax, and has the facial quadrangle as broad below as above and the eyes scarcely if at all emarginate.

Habitat.—Eddy, New Mexico. 1 (=type) from flowers of *Malvastrum*, April 13 (Cockerell).

THE LIFE HISTORIES OF THE NEW YORK SLUG-CATERPILLARS.—XX.

BY HARRISON G. DYAR,

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The series of papers published in the JOURNAL of the New York Entomological Society, under this title, which ceased in 1899, was subsequently continued in 1907 by an account of an additional species, then just worked out. The species which will be now discussed has not been studied from New York material and there are no actual records of the species occurring in the state, yet the probability is that it does so occur, at least occasionally. In 1883 it was taken in Morris Plains, New Jersey, this year having been apparently a specially favorable one for slug-caterpillars, as I remember that *Phobetron pithecium* was remarkably common that year in New York. Again, *Isochaetes beutenmuelleri*, with a typically southern distribution, was taken on Staten Island in 1901 by Mr. Joutel. With these records, therefore, I am inclined to list *Monoleuca semifascia*, here discussed, as one of the New York slug-caterpillars.

I have been attempting to obtain this larva for the past fifteen years. My first trips to Morris Plains, N. J., in 1898 and 1899, were unsuccessful, as were three subsequent ones to Tryon, North Carolina, where Mr. Fiske had taken adults. In these trips it was sought to find larvæ, and the lack of success led me to suspect some unusual habit or food plant. However, such does not seem to be the case. I simply missed finding the larvæ. On the fourth trip to Tryon, N. C., in 1911, with the light tent described by Mr. H. S. Barber (Proc.